DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	BATSON POND	Lake Area (ha):	6.15
Town:	WOLFEBORO	Maximum depth (m):	2.7
County:	Carroll	Mean depth (m):	1.1
River Basin:	Merrimack	Volume (m^3):	68000
Latitude:	43°40'20" N	Relative depth:	1.0
Longitude:	71°09'14" W	Shore configuration:	1.71
Elevation (ft):	998	Areal water load (m/yr):	6.49
Shore length (m):	1500	Flushing rate (yr^{-1}):	5.90
Watershed area (ha):	69.0	P retention coeff.:	0.61
% watershed ponded:	0.0	Lake type:	natural

BIOLOGICAL:		25 January 1994	19 July 1993
DOM. PHYTOPLANKTON (% TOTAL)	#1	SPARSE - NO DOMINANT	CERATIUM 25%
	#2		SPHAEROCYSTIS 20%
	#3		FILAM. BL-GR SPP 20%
PHYTOPLANKTON ABUNDANCE (cells/mL)			840
CHLOROPHYLL-A ($\mu g/L$)			4.88
DOM. ZOOPLANKTON (% TOTAL)	#1	KERATELLA 50%	NAUPLIUS LARVA 56%
	#2	CALANOID COPEPOD 50%	CALANOID COPEPOD 18%
	#3		KERATELLA 13%
ROTIFERS/LITER		6	38
MICROCRUSTACEA/LITER		6	262
ZOOPLANKTON ABUNDANCE (#/L)		12	302
VASCULAR PLANT ABUNDANCE			Common/Abun
SECCHI DISK TRANSPARENCY (m)			2.1
BOTTOM DISSOLVED OXYGEN (mg/L)		5.9	5.8
BACTERIA (E. coli, #/100 ml)	#1		1
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None
Hypolimnion volume (m^3) : None
Anoxic volume (m^3) : None

CHEMICAL:

Lake: BATSON POND
Town: WOLFEBORO

	25 January 1994		19 July 1993		
DEPTH (m)	1.5		1.5		
pH (units)	5.8		6.1		
A.N.C. (Alkalinity)	3.1		1.8		
NITRATE NITROGEN	0.09		< 0.02		
TOTAL KJELDAHL NITROGEN	0.59		0.48		
TOTAL PHOSPHORUS	0.027		0.027		
CONDUCTIVITY (μmhos/cm)	26.8		18.0		
APPARENT COLOR (cpu)	65		65		
MAGNESIUM			0.34		
CALCIUM			1.1		
SODIUM			1.4		
POTASSIUM			< 0.40		
CHLORIDE	< 2		< 3		
SULFATE	4		3		
TN : TP	25		18		
CALCITE SATURATION INDEX			4.9		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1993

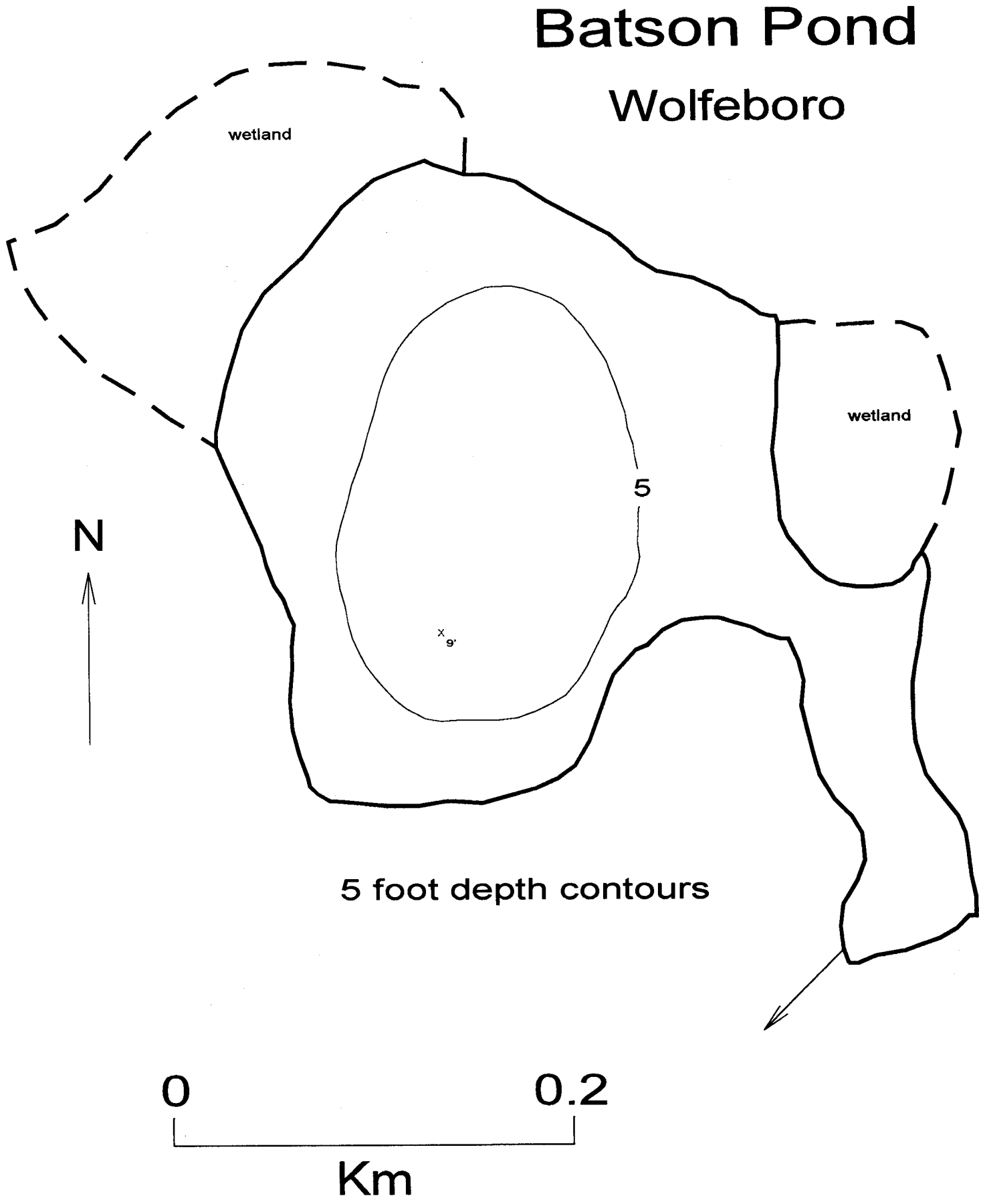
D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	3	4	1	8	Meso.

COMMENTS:

1. This was an essentially private (privately-owned land surrounded the pond), relatively inaccessible pond that was sampled cooperatively with the NH Fish and Game Department.

2. Pond bottom had a very gradual slope -- no steep-sided drop-offs.

3. Schroederia (60%) was the dominant wholewater phytoplankton genus, with green algae (80%) the dominant class.


Batson Pond
Wolfeboro
wetland
wetland
5
N
9'
5 foot depth contours
0
0.2
Km

FIELD DATA SHEET

LAKE: BATSON POND
DATE: 07/19/93

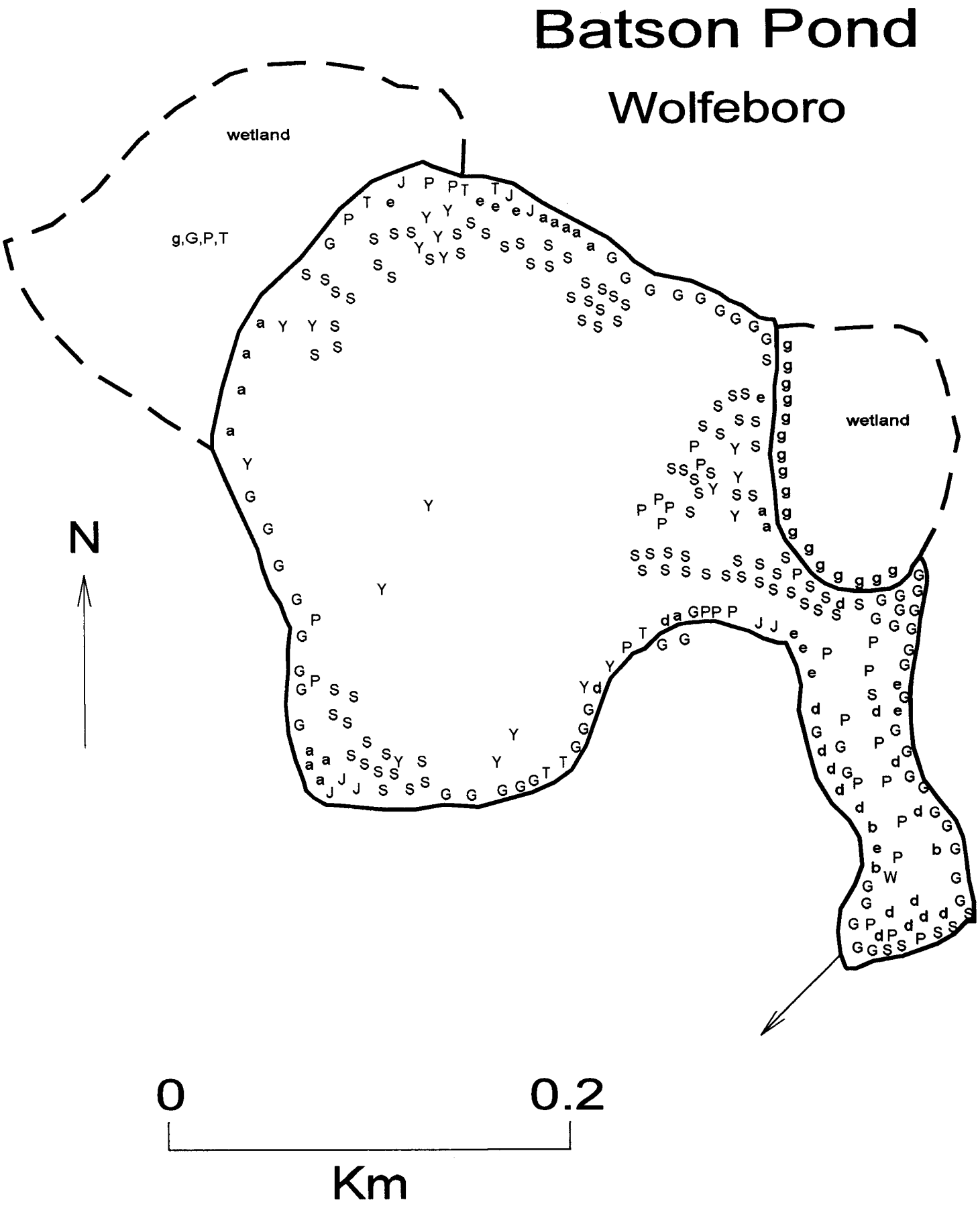
TOWN: WOLFEBORO
WEATHER: CLOUDY, WARM & CALM

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	23.0	8.4	97 %
	0.5	22.8	8.3	94 %
	1.0	22.4	7.8	88 %
	1.5	21.0	7.5	83 %
	2.0	21.7	6.8	75 %
	2.5	21.0	5.8	64 %

SECCHI DISK (m): 2.1
BOTTOM DEPTH (m): 2.7
TIME: 1100

COMMENTS:

*Dissolved oxygen values are in mg/L


Batson Pond
Wolfeboro
wetland
g,G,P,T
wetland
N
0
0.2
Km

AQUATIC PLANT SURVEY

LAKE: BATSON POND TOWN: WOLFEBORO DATE: 07/19/93

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
S	Sparganium	Bur reed	Scat/Common
Y	Nuphar	Yellow water lily	Scattered
P	Pontederia cordata	Pickerelweed	Scat/Common
T	Typha	Cattail	Sparse
d	Dulichium arundinaceum	Three-way sedge	Sparse
a	Peltandra virginica	Arrow arum	Scattered
G	Gramineae	Grass family	Common
J	Juncus	Rush	Scattered
W	Potamogeton	Pondweed	Sparse
e	Eleocharis	Spike rush	Sparse
b	Scirpus	Bulrush	Sparse
g	Myrica gale	Sweet gale	Common
A	Sagittaria	Arrowhead	Sparse

OVERALL ABUNDANCE: Common/Abun

GENERAL OBSERVATIONS:

1. Plants were very abundant in the southeastern cove.
2. The overall abundance rating is based on the open section of the pond; it does not include the very abundant plants in the surrounding wetlands.
3. Freshwater sponges were observed.